

9. *Phægorista trialbata*.

♂.—85 mm.

Akin to *agaristoides*, differing as follows:—Palpus with third joint shorter; second joint beneath narrowly marked with white (in *agaristoides* less narrowly with orange).

*Fore wing* above with the oblique streak behind cell larger and narrower, pinkish white; a small long-oval pinkish-white spot in front of it, beyond middle of cell; subapical patch white, as in some *agaristoides*, but considerably broader and somewhat longer, reaching vein  $M^2$ , its distal edge irregularly curved; no supplementary spot on submedian fold; fringe not white at apex.

*Hind wing* with the border narrower than in *agaristoides*; orange ground-colour less reddish than in most *agaristoides*. *Fore wing* beneath orange as far as the black apical area, only with the costal margin narrowly black.

Uganda (*E. S. Gledhill*). Type in coll. Joicey.

XXXIX.—*Descriptions and Records of Bees*.—LXXXI.

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*Augochlora (Odontochlora) lyoni*, sp. n.

♀.—Length about 8·5 mm., anterior wing 6.

Robust, black, with strong metallic tints as follows: clypeus (which is smooth, with well-separated large punctures) green in middle and purplish at sides; cheeks blue-green next to orbits, otherwise purplish; region on each side of antennæ obscurely purplish; vertex greenish; tubercles bright green; mesothorax with disc obscurely green, margins purple; scutellum greenish; postscutellum and area of metathorax purple; mesopleura dark purple edged with blue; first abdominal segment suffused sublaterally with bright green and purple; second with similar colours, but less distinct, the remaining segments black. Flagellum ferruginous beneath; front dull and granular; ocelli not enlarged; process of labrum broadly truncate, slightly bigibbons; mesothorax densely punctured, except the posterior middle, where the punctures are sparse on a shining ground; area of metathorax with numerous very fine more or less wrinkled striæ; posterior face with no

sharp margin; tegulæ reddish. Wings dusky, stigma and nervures pale yellowish brown; first r. n. meeting second t.-c. Legs reddish piceous, with pale pubescence; hind spur simple. Abdomen shining, thinly hairy, with very small punctures; first dorsal segment with a low tubercle on middle of disc; first ventral segment with a long slender spine; last dorsal segment with fuscous hair.

San Julian, Venezuela, July 19, 1900 (*M. W. Lyon, Jr.*). U.S. Nat. Museum.

Nearest to the Mexican *A. zophodes* (*Halictus zophodes*, Vachal), but distinguished by the smooth and shining surface of clypeus, with well-separated punctures. The tubercle on the first dorsal segment of abdomen recalls the Australian *Halictus mirandus*, Ckll.

*Agapostemon viequesensis*, sp. n.

♀.—Length about 8 mm., anterior wing 6.

Head and thorax brilliant bluish green; lower margin of clypeus broadly black; labrum and mandibles red, the latter black subapically; sides of face and front suffused with purple-blue; flagellum dull ferruginous beneath, but the last joint bright ferruginous on both sides; clypeus and supraclypeal area shining; mesothorax dull, minutely granular; scutellum rather yellowish green, shining, somewhat bigibbous; area of metathorax purple, poorly defined, with obscure rugæ; posterior truncation bright green, with a sharp edge; tegulæ light ferruginous. Wings dusky hyaline, stigma clear honey-colour; second s.m. receiving first r. n. a considerable distance from its end. Legs light ferruginous, with pale yellowish hair, that on outer sides of tibiæ more or less fuscous. Abdomen mainly yellowish green, with blue-purple shades on apical half, but the first three segments have transverse median bands of reddish brown, where the surface is not metallic; bases of segments with pale tomentum; venter mainly pale fulvous.

Vieques Island, Porto Rico, West Indies, Feb. 1899 (*Aug. Busck*). U.S. Nat. Museum.

In Vachal's table it runs out at 14, and it is scarcely to be compared with any described species. The extreme bases of the abdominal segments are testaceous, but the apical margins sliding over them are not noticeably discoloured.

*Neocorynura discolor* (Smith).

*Angochlora tisiphone*, Gribodo, is a synonym. Smith's

type was from Oajaca, and Gribodo's was marked "Oajuca?" (*sic*).

The following species are now recorded from new localities:—

*Augochlora radians* (Vachal). Cacao, Trece Aguas, Alta Vera Paz, Guatemala, April 25 (*Schwarz and Barber*).

This is probably the same as the so-called *A. vesta* from Mexico in the British Museum, but it is not true *vesta*.

*A. fervida*, Smith. Tlahualilo, Durango, Mexico, at peach blossoms (*A. W. Morrill*).

*A. illustris* (Vachal). Colombia, from C. F. Baker collection.

*A. phamonoë* (Schrottky). Sapucay, Paraguay, March (*W. T. Foster*).

*A. nigrocyanea*, Ckll. Tampico, Tamaulipas, Mexico, Dec. 6 (*F. C. Bishopp*).

*A. esox* (Vachal). Paraiso, Canal Zone, Panama, Jan. 18 (*Aug. Busck*).

*A. seminigra*, Ckll. Cordoba, Mexico, Jan. 20 (*F. Knab*).

The *A. nigrocyanea* females from Tampico are variable; one has strong purple tints on apical part of abdomen, which the other lacks; the latter has the mesothorax black.

*Xenoglossa howardi*, sp. n.

♂. (Type.)—Length about 12 mm., anterior wing 9.

Black, including the clypeus and antennæ; mandibles fulvous apically, bidentate, but with a slight notch on inner side indicating the rudiment of a third tooth; labrum brown at sides, covered with appressed pale hair; maxillary palpi 5-jointed; hair of head long and creamy white, with some fuscous hairs on vertex and below antennæ; hair of thorax above clear reddish fulvous, without black; a large patch on middle of mesopleura, and tubercles, with dark fuscous hair; tegulæ ferruginous. Wings dusky. Legs black, the spurs stramineous, and tarsi at apex ferruginous; hair of middle and posterior tibiæ and tarsi dark brown, but the femora and anterior legs with pale hair. Abdomen shining black, minutely punctured, hind margins of segments 2 to 4 suffusedly reddened; no hair-bands, but base of second segment at sides with thin greyish hair; venter with thin whitish hair.

♀.—Length about 12.5 mm.

Similar to the male, but all the legs with dark brown

hair; dark brown hair on sides of thorax more extensive; second and third abdominal segments with a thin transverse band of greyish tomentum, not conspicuous.

Type (male) from the Federal District, Mexico (*J. R. Inda*, 56). U.S. Nat. Museum. Female from Oaxaca, Mexico, Sept. 18 (*L. O. Howard*).

Related to *X. assimilis* (Smith), but without the black patch of hair on thorax above in female. The male antennæ are formed as in *X. pruinosa* (Say). The species belongs to the subgenus *Peponapis* of Robertson, though differing from his type-species in the black clypeus of male and reduction of pale hair on female abdomen.

*Allodape candida*, Smith.

♀.—Mkonumbi, near Lamu, Tana River, E. Africa, Sept. 1892 (*Chanler Exped.*).

This differs slightly from Smith's description, and from a specimen from Abyssinia, sent by Gribodo, in that the light band on clypeus is not at all widened at the lower end.

*Leptergatis globulifera*, sp. n.

♂.—Length 6-6.5 mm.

Black, with the long flagellum dull ferruginous beneath, tegulæ rufo-piceous, legs more or less suffused with reddish, the tarsi and tibiæ at apex ferruginous.

Close to *L. armata* (Smith), differing thus: scape dark; ocelli closer together; clypeus and labrum entirely black, mandibles mainly dark reddish; tegulæ darker; abdominal hair-bands less distinct; wings a little more dusky. The hind legs are practically as in *L. armata*. The co-type has the mandibles paler, with a large pale yellowish spot, beyond which they are ferruginous.

Venezuela; type from Aroa, Dec. 12, 1910 (*M. A. Carriker*). U.S. Nat. Museum. Another is from Lagunita de Aroa, 2000 ft. alt. (*M. A. Carriker*).

*Prosopis holomelæna*, sp. n.

♀.—Length about 6 mm., anterior wing 4.5.

Entirely black, without light markings; robust, with no depression between first and second dorsal abdominal segments; clypeus long, dull, the punctures very indistinct; apical part of flagellum bright ferruginous beneath; punctures of mesothorax and scutellum excessively minute, the

surface between them microscopically rugulose; area of metathorax with irregular rugæ; tegulæ black. Wings slightly dusky, stigma and nervures very dark; second s.m. long; recurrent nervures meeting the transverso-cubitals; tibiæ and tarsi with some pale hair. Abdomen shining, impunctate, the surface with a delicate microscopical tessellation.

Buitenzorg, Java, March 10, 1909 (*Bryant and Palmer*).  
U.S. Nat. Museum.

Nearest to *P. impunctata*, Friese, but easily separated by the entirely black face.

*Prosopis coroicensis*, sp. n.

♂.—Length about 7.5 mm., anterior wing 6.2.

Black, robust, without yellow markings on thorax or legs; face long, eyes very long; clypeus (except a narrow dark stripe on each side), large supraclypeal mark (rounded above), lateral face-marks (extending along orbital margins halfway up front, where they end obtusely, shaped like feet on tip-toe, with very long tapering toes), all bright chrome-yellow; antennæ piceous; scape very short; mandibles stout, suffused with reddish; front dull, very densely and finely punctured; mesothorax and scutellum dull, with very large well-separated punctures; mesopleuræ with large sparse punctures; area of metathorax with coarse transverse and longitudinal ridges; posterior truncation very coarsely sculptured, flat, with well-defined margins; tegulæ piceous. Wings deep fuliginous; first r. n. joining first s.m. considerably before its end. Legs more or less reddish, the anterior tibiæ dusky ferruginous in front. Abdomen shining, without hair-bands; first two segments quite strongly punctured, third with minute punctures; first ventral segment emarginate at apex.

Coroico, Yungas, Bolivia, May 1, 1899. U.S. Nat. Museum. No collector's name is given.

By the venation this resembles *P. petroselini*, Schrottky, but it is easily separated by the fuliginous wings and other characters.

*Prosopis tricolor*, Schrottky.

♀.—Differs from the male thus: clypeus with an elongate-cuneiform rufo-fuscous mark on each side; antennæ entirely ferruginous; yellow band on prothorax interrupted in

middle ; marks at bases of tibiæ cream-colour. Schrottky only described the male.

San Bernardino, Paraguay, Oct. 21 (*K. Fiebrig*). U.S. Nat. Museum.

*Prosopis flavohumeralis*, sp. n.

♀.—Length about 6 mm., anterior wing 4·5.

Black, with yellow markings; mandibles ferruginous; labrum black; clypeus yellow except narrow lower margin and a stripe on each side, failing above; supraclypeal mark broadly subtriangular, while above it, on front, are two narrow yellow marks close together; lateral face-marks extending nearly to summit of eye, where they are broadly but very obliquely truncate, and diverge a little from the orbital margin; scape and flagellum dusky ferruginous beneath, darker above; front very densely and minutely punctured, vertex more coarsely; tubercles and the sharp projecting anterior lateral angles of prothorax yellow, but no other yellow on thorax; mesothorax and scutellum perfectly dull and coarsely punctured; area of metathorax with raised lines in the form of a square, but without the sculpture, except a microscopical cancellation all over; posterior truncation distinct; tegulæ with a yellow spot. Wings dusky; recurrent nervures meeting transverso-cubitals; marginal cell broad (deep). Legs with anterior tibiæ yellow in front, the others at base; tarsi more or less reddish. Abdomen shining, without hair-bands; first segment distinctly though minutely punctured, second and third extremely sparsely and indistinctly.

San Bernardino, Paraguay (*K. Fiebrig*). U.S. Nat. Museum.

In Schrottky's tables of Paraguay species this runs to *P. itapuensis*, Sky., but differs by the dusky wings and spots on angles of prothorax. It seems to closely resemble *P. lychnis*, Vachal, differing in the punctuation of the abdomen.

*Prosopis howardiella*, sp. n.

♂.—Length about 3·5 mm.

Head all black except a large obtusely trilobed (the sides concave) pale yellow patch on clypeus; scape black; flagellum thick, ferruginous beneath; thorax entirely black; mesothorax and scutellum with sparse very minute punctures on a microscopically tessellate surface; area of metathorax

large, with a few small irregular basal plicæ, and a median raised line continuous to hind margin; posterior truncation of metathorax not clearly defined as usual, its upper lateral corners not defined at all, but its upper middle separated by a short ridge from the basal area, while an oblique ciliated ridge limits it on each side; abdomen impunctate, microscopically transversely lineolate, first segment narrowed. Wings clear, very faintly dusky apically; recurrent nervures ending a little before the transverso-cubitals; second submarginal cell nearly square, its inner and outer sides parallel; bases of tibiæ, and anterior tibiæ in front, cream-colour; tarsi pale ferruginous.

Oaxaca, Mexico, April 30 (*L. O. Howard*). U.S. National Museum.

Looks like some small Pemphredonid wasp, but is a true bee, with many plumose hairs on body. It is more or less related to Vachal's *P. recisa*, *P. puerula*, *P. fissa*, &c., but much smaller and very distinct.

*Prosopis subgrisea*, sp. n.

♀.—Length about 7 mm., anterior wing 5·3.

Black, with yellowish-white or brownish-white markings; mandibles and labrum black; clypeus long, black, the lower margin suffusedly reddish, but with a cream-coloured stripe running down its middle (not quite reaching upper end), not quite so broad as the area on either side; supraclypeal mark small, roundish; lateral face-marks linear, extending along orbital margins nearly halfway up front; scape and base of flagellum ferruginous, rest of flagellum black above and faintly reddish below; front appearing granular; upper part of prothorax with linear light margin, and greater part of tubercles light; a light band covering anterior half of scutellum, a band on postscutellum, and axillæ light; mesothorax dull, coarsely punctured; area of metathorax with coarse rugæ; posterior truncation and sides of metathorax densely covered with pale grey tomentum; pleura sparsely punctured; tegulæ with a light spot. Wings brownish hyaline, with the costal field, including marginal cell and beyond, fuliginous; hind tibiæ with rather more than basal half white. Abdomen dullish, the punctures excessively minute and close; first and second segments with yellowish-white marginal hair-bands, third to fifth with hind margins obscurely pallid; apex with dark fuscous hair.

San Rafael, Jicoltepec, Mexico. U.S. National Museum. From the Ashmead collection; no doubt collected by C. H. T. Townsend.

Resembles *P. mexicana*, Cresson, but easily separated by the linear lateral face-marks, and other characters. It is evidently closely allied to *P. maculipennis*, Smith, known only in the male, but that has yellow markings and the first abdominal segment rather strongly punctured.

*Prosopis knabi*, sp. n.

♂.—Length about 3.75 mm., anterior wing 3.

Black, with yellow markings; scape black, broadly red at end, and largely in front; flagellum entirely bright ferruginous, a little darker above; clypeus entirely, subtriangular supraclypeal mark (broader than long), and lateral face-marks all light yellowish, the latter ending obtusely on orbital margin about halfway up front (former practically as in *P. episcopalis*, Ckll.); pale marks of thorax confined to tubercles and a broadly interrupted line on prothorax above; tegulæ testaceous, hyaline in front, with a yellow spot; mesothorax closely and strongly punctured, scutellum rather more sparsely, the surface between the punctures smooth; base of metathorax with strong longitudinal and transverse rugæ, but the sculpture is mainly and essentially transverse; whole sides of thorax strongly punctured, the metathorax at sides bare (without grey tomentum); knees, anterior tibiæ (except a large patch behind), middle and hind tibiæ very broadly at base and narrowly at apex, and the tarsi all pale yellow. Wings clear; stigma and nervures sepia; first recurrent nervure joining first submarginal cell a short distance before its end. Abdomen appearing impunctate under a lens, but the microscope shows minute punctures on first segment.

Champerico, Guatemala, Aug. 4, 1905 (*Frederick Knab*). U.S. National Museum.

This minute species recalls some of those of the United States, such as *P. modesta*, Say, but it will be readily known by the red flagellum and transverse rugæ at base of metathorax.

The following localities are new:—

*Prosopis mexicana*, Cresson. Tampico, Mexico, Dec. 15 (*E. A. Schwarz*); Frontera, Mexico.

*Prosopis azteca*, Cresson. San Rafael, Jicoltepec, Mexico (*L. O. Howard*).